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June 27, 2012

Joel Coffman
U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street (WST-8)
San Francisco, CA 94105-3901

**RE: Release Investigation Work Plan, Speedy's Convenience One Truck Stop
Interstate 40, Exit 359, Lupton, Arizona (NAV 001)**

Dear Mr. Coffman:

On behalf of Speedy's Convenience One Truck Stop (Speedy's), Animas Environmental Services, LLC (AES) submits the enclosed Release Investigation Work Plan associated with a gasoline spill that occurred at the facility on December 24, 2011.

If you have any questions regarding the work plan, please do not hesitate to contact me at (505) 564-2281.

Sincerely,

A handwritten signature in blue ink that reads "Ross Kennemer". The signature is fluid and cursive, with the first name "Ross" and last name "Kennemer" clearly legible.

Ross Kennemer
Senior Project Manager

Enclosure: Release Investigation Work Plan, June 27, 2012

cc: Henry Haven
NNEPA-UST Program
P.O. Box 339
Window Rock, AZ 86515

Mark Nicholson
Speedy's One Truck Stop
920 E. Highway 66
Gallup, NM 87301



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Prepared for:

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Henry Haven
NNEPA-UST Program
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Release Investigation Work Plan

Speedy's Convenience One
Truck Stop, Interstate 40,
Exit 359, Lupton, Arizona
(NAV 001)

June 27, 2012

Prepared on behalf of:

Mark Nicholson
Speedy's One Truck Stop
920 E. Highway 66
Gallup, NM 87301

Prepared by:

Animas Environmental Services, LLC
624 E. Comanche
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1.0 Introduction

On behalf of Speedy's Convenience One Truck Stop (Speedy's), Animas Environmental Services, LLC (AES) has prepared this work plan for completion of a Release Investigation associated with a gasoline release that occurred at the site on December 24, 2011. This work plan is submitted as directed in U.S. Environmental Protection Agency (USEPA) correspondence to Speedy's, dated May 23, 2012.

The scope of the proposed investigation is to determine the vertical and horizontal extent of residual contaminated soils and to determine the horizontal extents of potential groundwater impacts and will be completed in accordance with 40 Code of Federal Regulation (CFR) 280.62, 280.63 and 280.65.

2.0 Project Location

The facility is located on the north side of Interstate 40 at Exit 359 on private lands within the Navajo Nation and is legally described as the Section 27, Township 23N, Range 31E, in Lupton, Apache County, Arizona, and Section 15, T23N, R21W, McKinley County, New Mexico. The facility is located on Parcel 209-13-002 and includes about 11.06 acres. Latitude and Longitude are N35.363028° and W109.048179°. An aerial site map is included as Figure 1.

3.0 Site Information

The facility has had hydrocarbon contaminant impacts to both soil and groundwater from previous releases associated with former underground storage tanks (USTs) and product piping. Site investigations have been completed by both the previous and current facility owners. Co-mingling of contaminant plumes associated with separate releases is a likely site characteristic. The facility is currently designated as a leaking underground storage tank (LUST) site under USEPA and Navajo Nation Environmental Protection Agency (NNEPA) oversight with the previous owner, Ultramar, Inc.

3.1 December 2011 Release

On December 24, 2011, a 400 gallon gasoline release occurred at the facility due to the failure of an overflow valve while a transport truck was transferring fuel to a UST. The released gasoline flowed across a concrete parking area from the UST southwest across the property and pooled in a frontage road bar ditch located on the west side of Grants Road (Interstate 40 Frontage Road), near the southern entrance of the truck stop. The bar ditch is within an

Arizona Department of Transportation (ADOT) right-of way (ROW) and ultimately discharges to the Puerco River, which is located 1,000 feet southeast. An aerial map showing the release location is included as Figure 1.

3.1.1 Release Response

As an immediate response to the release, Speedy's personnel used a backhoe to construct an earthen berm in the bar ditch to prevent further migration of the gasoline and also placed sandy soil across the release area to absorb gasoline pooled on the concrete surface of the parking area. The local volunteer fire department from Sanders, Arizona, also responded and observed the release response activities. Because the gasoline had been contained with the bar ditch and/or absorbed by the sandy soil on the concrete surface, no water or foam were dispensed by the fire department as part of response activities.

3.1.2 Release Excavation

On December 28 and 29, 2011, AES supervised the excavation of approximately 70 cubic yards of contaminated soils from the bar ditch. Due to the proximity of Grants Road to the excavation, an unknown volume of contaminated soil was not able to be excavated. In consultation with Speedy's, ADOT, and NNEPA, AES recommended and received verbal concurrence to suspend excavation work and complete a subsurface investigation in order to define the lateral and vertical extent of impacted soil prior to further mitigation efforts.

3.1.3 Soil Sampling

Prior to backfilling, AES collected confirmation soil samples from the base and sidewalls of the excavation for field screening of volatile organic compounds (VOCs) and laboratory analysis of benzene, toluene, ethylbenzene, xylene (BTEX) and total petroleum hydrocarbons (TPH). All confirmation laboratory analytical results were below laboratory detection limits or below applicable regulatory cleanup standards for total petroleum hydrocarbons (TPH), toluene, ethylbenzene, and total xylenes. However, soil benzene concentrations exceeded the USEPA Regional Screening Level (RSL) for protection of groundwater and the proposed NNEPA soil cleanup standards in samples S-3 (0.050 mg/kg), S-4 (0.068 mg/kg), S-5 (0.20 mg/kg), and S-7 (0.22 mg/kg). Details of the soil sampling and results were presented in the AES report entitled *Gasoline Release Response and Mitigation Report*, dated February 20, 2012. Confirmation soil sample locations from December 2011 are shown on Figure 2.

4.0 Proposed Scope of Work

AES will conduct all work in strict accordance with USEPA and NNEPA site investigation standards and procedures, in accordance with 40 CFR 280.62, 280.63 and 280.65 and applicable

industry standards. The scope of work for the investigation will include the following:

- Sampling and Analysis Plan (SAP)
- ADOT Right-of-Way Access Permitting
- Navajo Nation Division of Natural Resources (DNR) Department of Water Resources (DWR) Monitor Well Permitting
- Health and Safety Plan (HASP) Preparation
- Installation of at least 5 Soil Borings/Groundwater Monitor Wells
- Soil Field Screening and Analytical Sampling
- Initial Sampling of Groundwater Monitor Wells
- Preparation and Submission of an Investigation Report

4.1 Qualified Personnel

All work will be completed under the direct responsible supervisory control of Ross Kennemer, Senior Project Manager, and Elizabeth McNally, Arizona Registered Professional Engineer #38427.

4.2 Sampling and Analysis Plan

After approval of this work plan, AES will prepare and submit a project-specific Sampling and Analysis Plan (SAP). AES will maintain a rigorous quality assurance/quality control (QA/QC) program throughout the project to ensure that all work is conducted in a scientifically sound and legally defensible manner. The QA/QC procedures that will be utilized will be compliant with USEPA Quality System requirements.

4.3 ADOT Permits

An approved traffic control plan and a right-of-way access permit will be obtained from ADOT prior to beginning field work.

4.4 Site Specific Health and Safety Plan

AES has a Health and Safety Program in place to ensure the health and safety of all AES employees. The Health and Safety Program defines safety practices and procedures to be instituted in all AES work places, as applicable. The program meets the requirements promulgated by the Occupational Safety and Health Act (OSHA). All AES personnel are appropriately trained in accordance with OSHA 40 CFR 1910.120.

AES will prepare and implement a comprehensive site-specific Health and Safety Plan (HASP) for the proposed site work. All employees and subcontractors will be required to read and sign

the HASP to acknowledge their understanding of the information contained in it. The HASP will be implemented and enforced on site by the assigned Site Safety and Health Officer. Daily tailgate safety meetings will be held and documented and will address specific health and safety concerns or issues.

4.5 Subcontractors

All subcontractors retained by AES will be qualified and possess all appropriate licenses as required by the State of Arizona. AES anticipates that the subcontractors to be utilized for this project will include:

Drilling Services

Envirodrill, Inc., 8305 Washington Place, N.E. Albuquerque, NM, 87113
Telephone (505) 857-9876. www.enviro-drill.com.

Laboratory Services

Hall Environmental Analysis Laboratory, Inc., 4901 Hawkins NE., Albuquerque, NM, 87109
Telephone (505) 345-3975. www.hallenvironmental.com.

Professional Survey

Arrow Engineering, 3710 Ciniza Drive, Gallup, NM 87301
Telephone (505) 870-3430. arrow@cnteco.com

Waste Disposal

Envirotech, Inc., 5796 U.S. Highway 64, Farmington, NM, 87401
Telephone (505) 632-0615. www.envirotech-inc.com.

While on-site, all subcontractors will be required to comply with AES' Health and Safety Plan.

4.6 Notification

AES will notify the facility owner, USEPA, and NNEPA by telephone or in writing, at least four days, but not less than 96 hours, before the start of the field work. This notification will include a schedule of the proposed work. Additionally, AES will make no modification to the approved work plan without consultation and written approval of the facility owner, USEPA, and NNEPA.

4.7 Utilities Notification

AES will utilize the Arizona One-Call system to identify and mark all underground utilities at the facility before the start of the field work. Any additional utilities not part of Arizona One-Call,

such as Navajo Tribal Utilities Authority (NTUA), will be contacted separately for utility locates.

4.8 Soil Boring/Groundwater Monitor Well Installation & Sampling

4.8.1 Installation of Soil Borings/Groundwater Monitoring Wells

Subsurface soils are expected to consist of sand, clay, and clay mixtures to a depth of approximately 50 feet below the ground surface (bgs). Based on historic monitoring data collected at the facility by others, groundwater is anticipated to be encountered between 30 and 35 feet bgs. AES believes that hollow-stem auger drilling is the most suitable and cost-effective method of advancing the soil borings and installing 2-inch diameter monitor wells. For the purpose of this workplan, it has been assumed that **at least 5** soil borings will be advanced, and all soil borings/monitor wells will have a maximum depth of 45 feet bgs. Locations of the proposed soil borings/monitoring wells are shown on Figure 3.

AES anticipates that approximately **three** days will be required to complete the drilling, monitor well installation, and surface completions and will arrange with Enviro-Drill to provide drilling services with a CME 75 drill rig equipped with hollow stem augers (4.25-inch inside diameter and 7.25-inch outside diameter).

4.8.2 Soil Sample Collection Methods, Field Screening, and Laboratory Analyses

Each soil boring will be continuously sampled from the ground surface to the base of the boring or top of groundwater. Split-spoon samplers, 3-inch diameter by 5 feet in length, will be used for sample collection.

Field Screening of Volatile Organic Compounds

At a minimum, two heated headspace photo-ionization detector (PID) organic vapor meter (OVM) measurements for VOCs will be taken from each split-spoon sample. Field screening data for each boring will be recorded on its respective Soil Boring Log.

Sample Identification and Handling

Field PID-OVM sample containers will be labeled at the time of sample collection. Field analysis results will be recorded onto the Soil Boring Log. Laboratory samples will be properly labeled and logged onto the chain-of-custody record. All laboratory samples will be preserved on ice in an insulated cooler at 6°C until delivered to the analyzing laboratory.

Laboratory Analyses

At a minimum, two soil samples will be collected from each split-spoon sample and held in the event that they are needed for laboratory analysis. Based on highest field screening value, visible contaminant staining, and maximum boring depth, three samples from each soil boring

will be submitted for laboratory analysis. Laboratory analysis of soils will consist of the following:

- 15 soil samples (three from each boring) will be analyzed for full volatile organic compounds (VOCs) per USEPA Method 8260 and TPH per USEPA Method 8015. Laboratory analysis of samples will be performed by Hall, Albuquerque, New Mexico.
- As required for soil disposal, one composite sample of contaminated drill cuttings will be laboratory analyzed for waste characterization. Waste characterization analyses will also be performed by Hall.

4.8.3 Monitor Well Construction

Groundwater is anticipated to be encountered between 30 and 35 feet bgs, and AES proposes to construct **at least 5** 2-inch diameter monitor wells as follows:

- 2-inch diameter Schedule 40 PVC screen and blank casing;
- Screened interval will extend 15 feet across the water table and will be constructed of 0.010-inch (0.26 mm) slotted screen;
- Sand pack will extend from the bottom of the well up to approximately 2 feet above the top of the screen and will consist of 10/20 Colorado silica sand;
- A 2-foot thick bentonite plug will be installed directly above the sand pack;
- Concrete grout with approximately 5 percent bentonite will be poured from the top of the bentonite plug up to within 1 foot of the top of casing;
- A well vault, locking well plug, and concrete pad will be installed on the well to prevent damage to the monitoring well and unauthorized access.

A schematic of the proposed construction methods and materials of the monitor wells is included as Figure 4.

Monitor Well Surface Completions

Surface completion will consist of flush-mounted well vaults that are water tight and rated for traffic. A concrete slab with a minimum 2-foot radius and 6-inch thickness will be poured around the well vault and sloped appropriately so that runoff flows away from the well. Each well will be stamped as **MW-XX** for proper well identification.

Well Development

Monitor wells will be developed using a well development pump or disposable bailer. Contaminated purged water from monitoring wells will be disposed of properly at an approved facility, and uncontaminated purged water will be disposed of on-site. It is estimated that

approximately 50 gallons will be purged from each well to ensure proper development. Contaminated purge water will be temporarily stored in sealed, labeled DOT-approved drums pending disposal.

Well Survey

The top of casing of each well will be professionally surveyed by an Arizona registered surveyor to determine USGS elevation, which will be established to an accuracy of 0.01 foot and tied to a USGS bench mark. The horizontal location of each well will be determined to an accuracy of 0.1 foot. AES will attempt to coordinate the survey to be tied to the same benchmark as the currently existing monitoring wells. Arrow Engineering, Gallup, New Mexico, will complete the well survey.

4.9 Groundwater Sampling

Once the monitor wells have been properly developed and allowed to stabilize for a minimum of 24 hours, the wells will be sampled. All groundwater sampling will be conducted in accordance with an approved SAP utilizing the procedures summarized below.

4.9.1 Depth to Groundwater Measurements

A KECK water level or a HERON interface meter will be utilized to record the distance from the top of the well casing to the top of groundwater. Measurement data will be recorded onto a Water Sample Collection Form.

4.9.2 Purging

Prior to sample collection, at least three well volumes will be purged from each well with a disposable bailer. During purging, pH, temperature, and conductivity will be monitored. Purging data will be documented on a Water Sample Collection Form along with purged water volume. All purging equipment will be thoroughly decontaminated between uses. Purged water will be disposed of properly.

4.9.3 Sample Collection

Groundwater sample collection will be conducted in accordance with an approved site-specific SAP which incorporates USEPA guidelines for sample preservation, QA/QC, and sample collection procedures. Groundwater samples will be collected with a disposable bailer equipped with a low-flow valve. Duplicate groundwater samples will be collected from each monitor well and held in the event that further laboratory analyses are required. All sample collection data will be documented on a Water Sample Collection Form.

4.9.4 Groundwater Laboratory Analyses

Groundwater samples will be analyzed for full VOCs per USEPA Method 8260 and TPH per USEPA Method 8015 at Hall in Albuquerque, New Mexico.

4.9.5 Equipment Decontamination Protocols

In order to ensure data validity and prevent cross-contamination, the following decontamination protocols for sampling equipment will be employed:

- wash with detergent (Alconox) and warm water
- rinse with warm water
- wash with detergent (Alconox) and warm water
- rinse with de-ionized water

4.10 Waste Disposal

4.10.1 Contaminated Drill Cuttings Disposal

Drill cuttings will be temporarily stored in labeled and sealed DOT-approved barrels and will be disposed of at an approved facility once waste characterization has been completed. AES anticipates that drill cuttings will be disposed of at the Envirotech Landfarm, located south of Bloomfield, New Mexico.

4.10.2 Contaminated Groundwater Disposal

Waste water resulting from well development and sample purging will be temporarily stored in labeled and sealed DOT-approved barrels and will be disposed of properly disposed of at an approved facility once waste characterization has been completed. AES anticipates that development and purge water will also be disposed of at the Envirotech Landfarm, located south of Bloomfield, New Mexico.

5.0 Property Restoration

Any property damaged or destroyed during this investigation will be repaired to its original condition by AES or its subcontractors within 30 calendar days after the damage or destruction has occurred.

6.0 Deliverables

6.1 *Site Investigation Report*

Once the monitoring wells have been installed and sampled, AES will prepare a report summarizing site investigation activities and sampling results. The report will include:

- Copies of required permits;
- Site plan with locations of all soil borings/monitoring wells, including professional survey data;
- Tabulated soil and groundwater analytical results;
- Soil boring logs and well completion reports;
- Geological characterization and cross-sections;
- Groundwater gradient map;
- Contaminant concentration maps;
- Well measurement and water quality data;
- Conclusions and Recommendations.

Copies of the report will be prepared and submitted to the facility owner, USEPA and NNEPA.

7.0 Implementation Schedule

AES proposes the following timeline to implement the release investigation. This schedule assumes that no inclement weather occurs, which could result in a delay in implementing field work.

<i>Initial Task</i>	<i>Days from Work Plan Approval</i>
1. Prepare and submit Sampling and Analysis Plan	14
2. Submit ADOT Access Permit	14
3. Submit Monitor Well Permits	14
	<i>Days from SAP Approval and Permit Approvals</i>
4. Prepare HASP and Complete Utility Notifications	7
5. Complete Investigation Field Work	21
6. Complete Professional Survey	35
7. Prepare and submit Investigation Report	65

8.0 Certification

On behalf of Speedy's Convenience One Truck Stop, Animas Environmental Services, LLC has prepared this work plan for completion of a Release Investigation associated with a gasoline spill that occurred at the site on December 24, 2011.

Respectfully Submitted,



Ross Kennemer
Principal



Elizabeth McNally, PE
Arizona Registration #38427

9.0 References

American Society for Testing and Materials (ASTM) International. *ASTM E 1903-11 Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*, ASTM, 2012

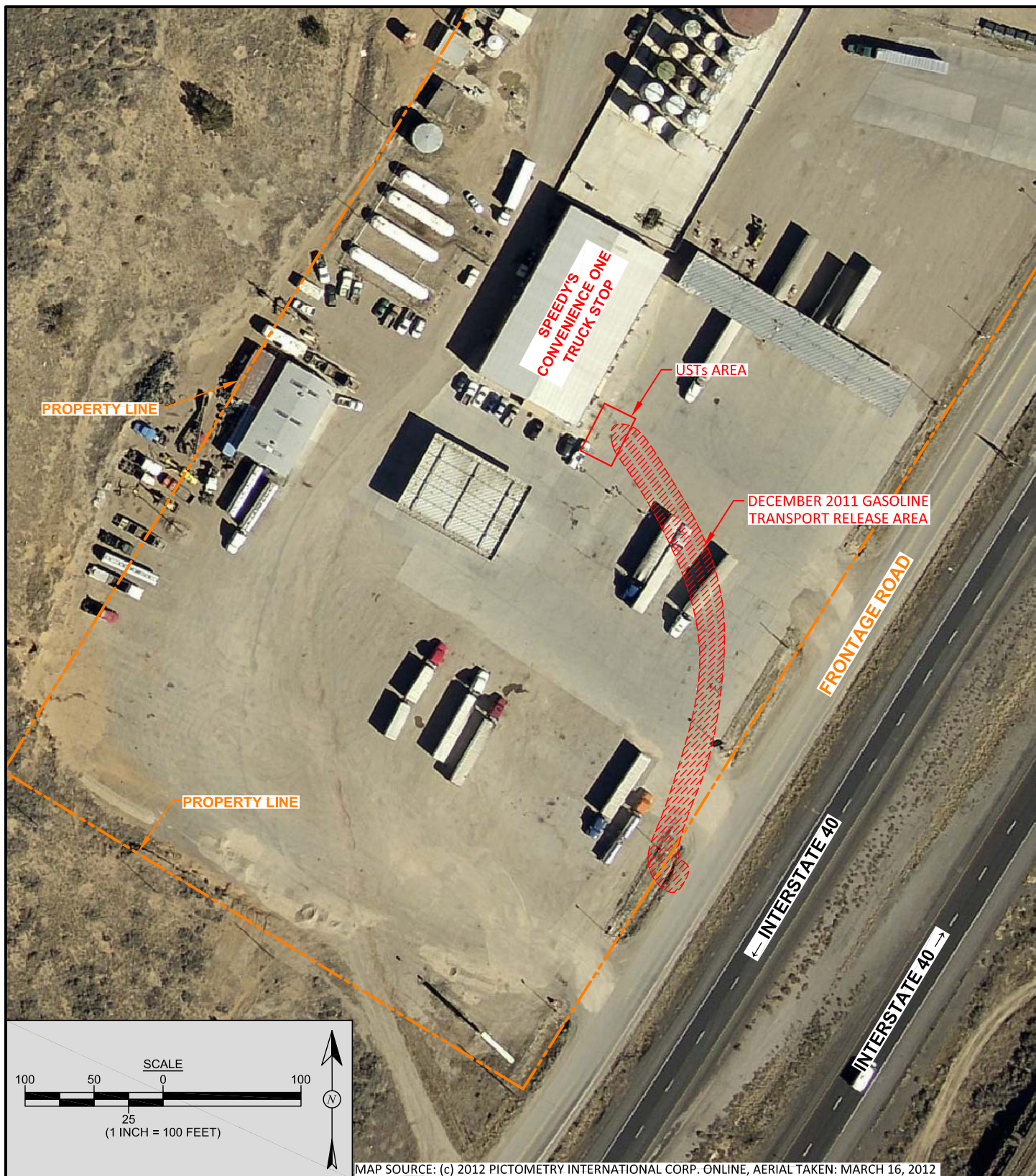
Animas Environmental Services, LLC. 2012. *Gasoline Release Response and Mitigation Report Speedy's Convenience One Truck Stop, Interstate 40, Exit 359, Lupton, Arizona*, February 20, 2012.

U.S. Environmental Protection Agency (USEPA). 1991. *Site Characterization for Subsurface Remediation*, EPA 625/4-91-026, November, 1991.

USEPA. 1997. Expedited Site Assessment Tools for Underground Storage Tank Sites. OSWER 5403G and EPA 510B-97-001, March, 1997.

USEPA. 2001. Environmental Investigations, Standard Operating Procedures, and Quality Assurance Manual (EISOPQAM), November 2001.

FIGURES



DRAWN BY: C. Lameman	DATE DRAWN: January 13, 2012
REVISIONS BY: C. Lameman	DATE REVISED: June 26, 2012
CHECKED BY: R. Kennemer	DATE CHECKED: June 26, 2012
APPROVED BY: R. Kennemer	DATE APPROVED: June 26, 2012

FIGURE 1

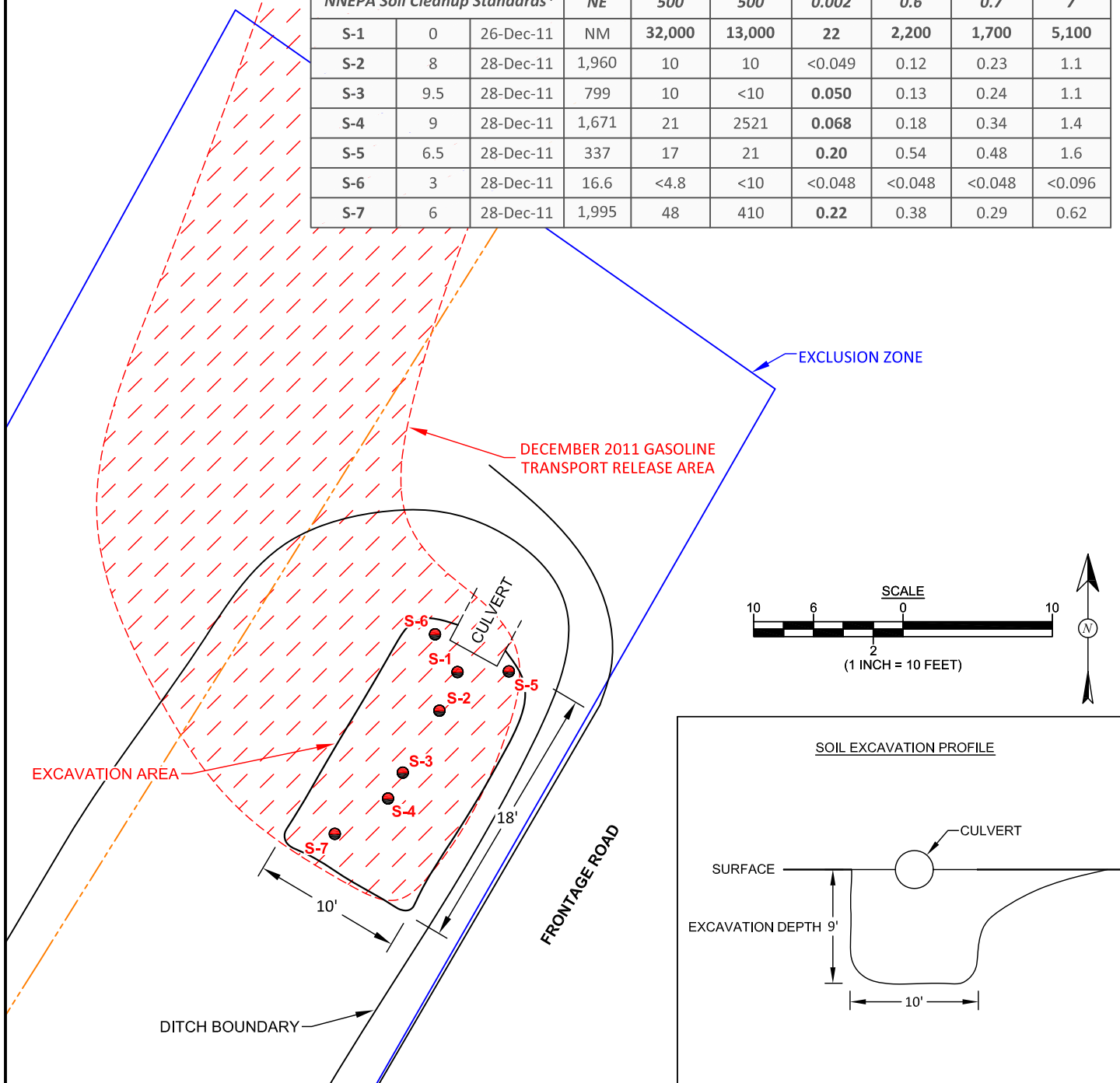
AERIAL SITE MAP
 SPEEDY'S TRUCK STOP
 INTERSTATE 40, EXIT 359
 LUPTON, ARIZONA
 NE¼, SW¼, SECTION 27, T23N, R31E
 N35.363028°, W109.048179°

LEGEND

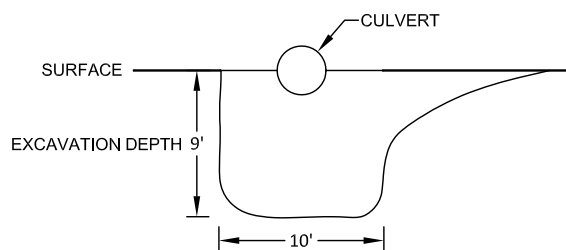
● SAMPLE LOCATION

NOTE: ALL SAMPLES WERE ANALYZED PER EPA METHOD 8021 AND 8015.

Sample ID	Depth (ft)	Date	PID-OVM (ppm)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)
Groundwater Protection Screening Level*			NE	NE	NE	0.0026	0.69	0.78	10
Industrial Soil Screening Level*			NE	NE	NE	1.1	45,000	27	27,000
NNEPA Soil Cleanup Standards*			NE	500	500	0.002	0.6	0.7	7
S-1	0	26-Dec-11	NM	32,000	13,000	22	2,200	1,700	5,100
S-2	8	28-Dec-11	1,960	10	10	<0.049	0.12	0.23	1.1
S-3	9.5	28-Dec-11	799	10	<10	0.050	0.13	0.24	1.1
S-4	9	28-Dec-11	1,671	21	2521	0.068	0.18	0.34	1.4
S-5	6.5	28-Dec-11	337	17	21	0.20	0.54	0.48	1.6
S-6	3	28-Dec-11	16.6	<4.8	<10	<0.048	<0.048	<0.048	<0.096
S-7	6	28-Dec-11	1,995	48	410	0.22	0.38	0.29	0.62



SOIL EXCAVATION PROFILE



DRAWN BY:
C. Lameman

DATE DRAWN:
January 13, 2012

REVISIONS BY:
C. Lameman

DATE REVISED:
February 21, 2012

CHECKED BY:
T. Ross

DATE CHECKED:
January 13, 2012

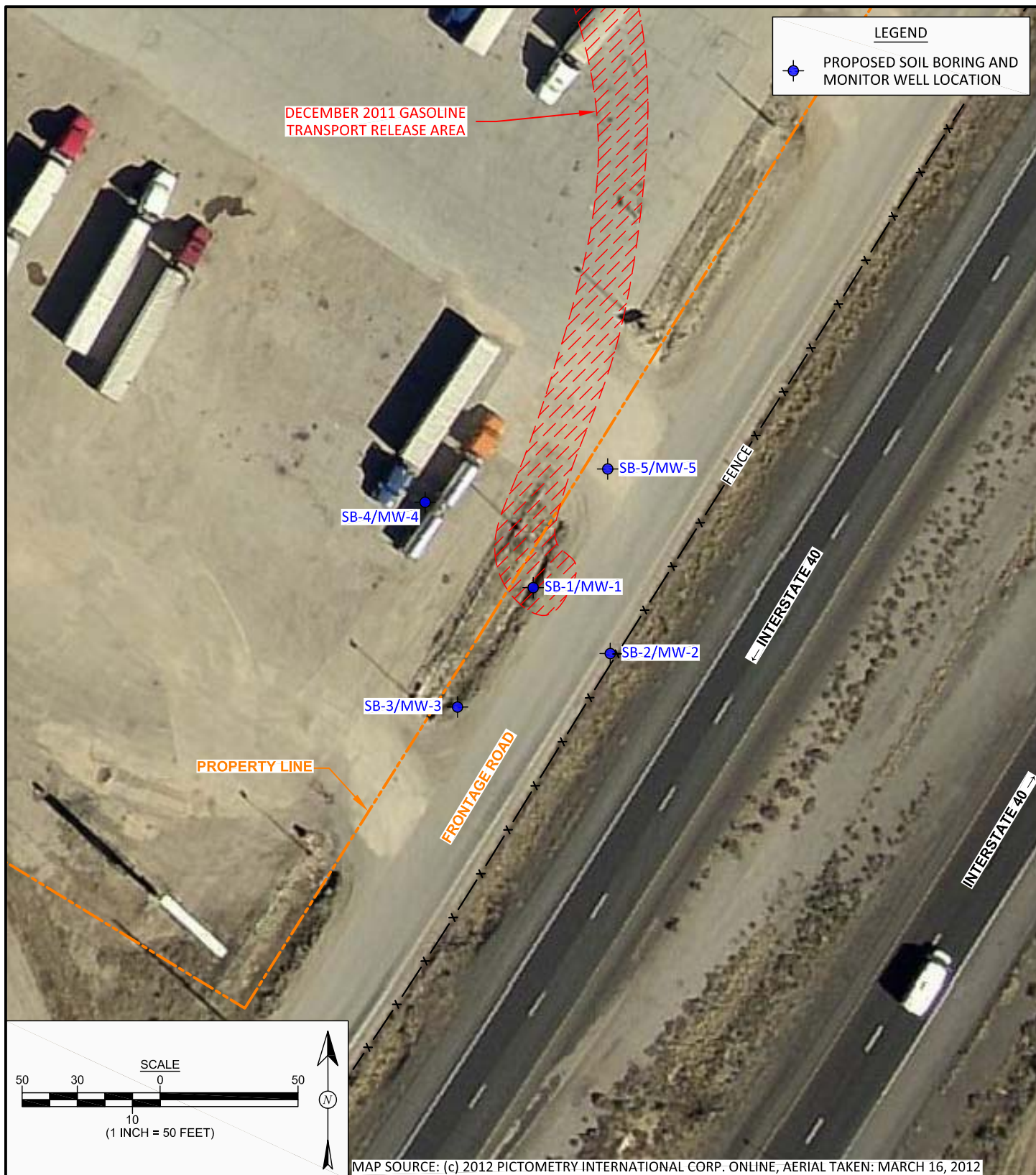
APPROVED BY:
E. McNally

DATE APPROVED:
February 21, 2012

FIGURE 2

SOIL SAMPLE LOCATIONS AND RESULTS DECEMBER 2011 RELEASE

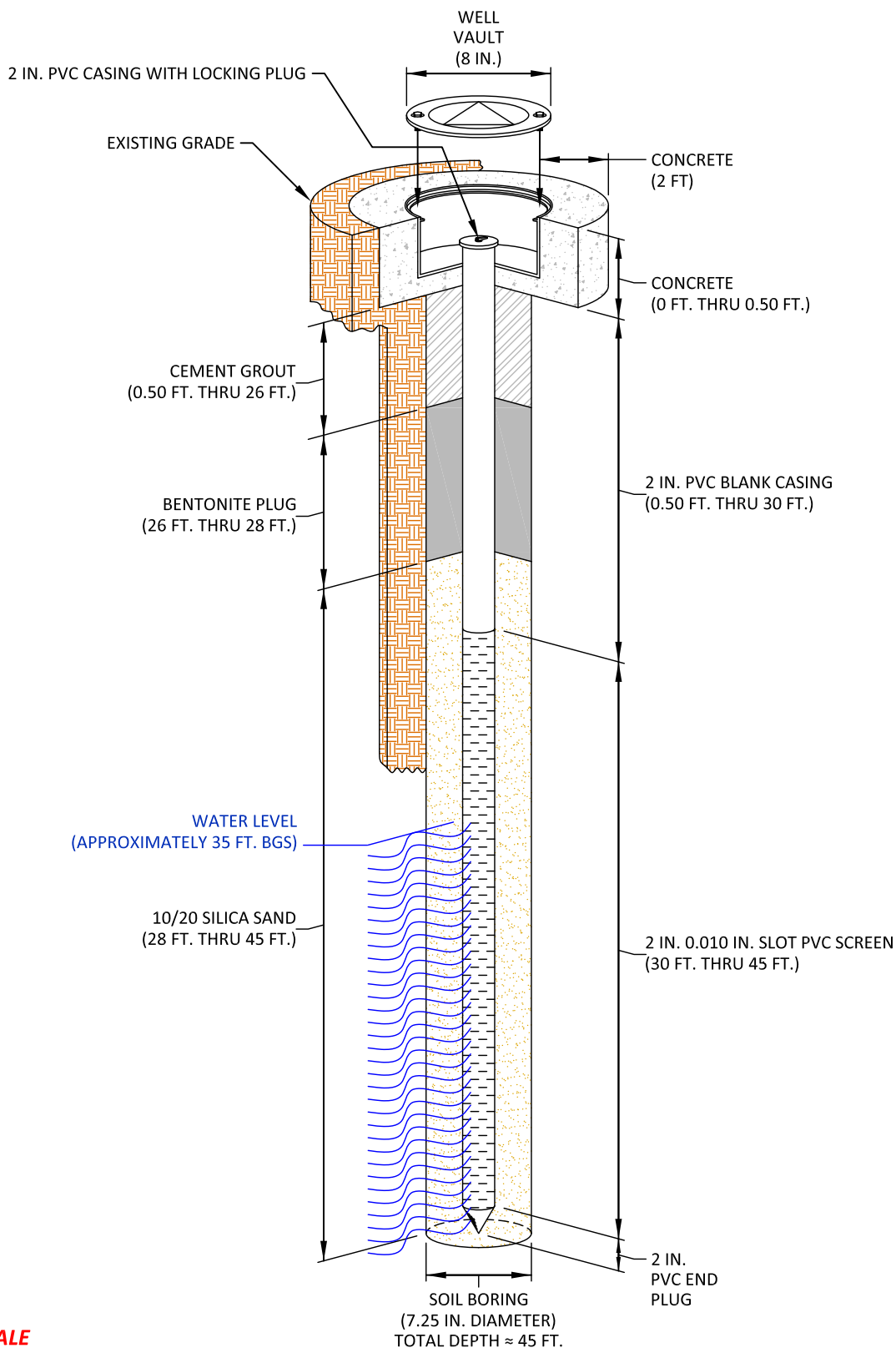
SPEEDY'S TRUCK STOP
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NE¼, SW¼, SECTION 27, T23N, R31E
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CHECKED BY: R. Kennemer	DATE CHECKED: June 26, 2012
APPROVED BY: R. Kennemer	DATE APPROVED: June 26, 2012

FIGURE 3

PROPOSED SOIL BORING AND MONITOR WELL LOCATIONS
 SPEEDY'S TRUCK STOP
 INTERSTATE 40, EXIT 359
 LUPTON, ARIZONA
 NE¼, SW¼, SECTION 27, T23N, R31E
 N35.363028°, W109.048179°



NOT TO SCALE



DRAWN BY:
C. Lameman

DATE DRAWN:
June 26, 2012

REVISIONS BY:
C. Lameman

DATE REVISED:
June 26, 2012

CHECKED BY:
R. Kennemer

DATE CHECKED:
June 26, 2012

APPROVED BY:
R. Kennemer

DATE APPROVED:
June 26, 2012

FIGURE 4

**PROPOSED MONITOR WELL
CONSTRUCTION SCHEMATIC**
SPEEDY'S TRUCK STOP
INTERSTATE 40, EXIT 359
LUPTON, ARIZONA
NE¼, SW¼, SECTION 27, T23N, R31E
N35.363028°, W109.048179°